

CLAIM AMENDMENTS

1 - 57. (canceled)

1 58. (new) A method of filling a row of bags, the method
2 comprising the steps of:

3 a) conveying the row of bags horizontally until one of
4 the bags is open upward into alignment underneath a filling
5 apparatus;

6 b) stopping the one bag underneath the filling apparatus
7 and, while the one bag is stopped underneath the apparatus and
8 without vertical displacement of the one bag, thereafter
9 sequentially

10 c) shifting the apparatus from a position wholly above
11 the one stopped bag into a position opening inside the one stopped
12 bag generally at a base of the one stopped bag;

13 c) pouring bulk material from the apparatus into the one
14 stopped bag while simultaneously raising the apparatus upward until
15 the one stopped bag is generally full and a predetermined upper
16 position is reached with the apparatus still engaged in the one
17 stopped bag;

18 e) stopping pouring of the material from the apparatus
19 when the upper position is reached;

20 f) lifting the apparatus out of the one stopped bag;

21 g) thereafter displacing the one stopped bag horizontally
22 out from underneath the apparatus; and

23 h) repeating steps a) through g) with the next bag in the
24 succession of bags.

1 59. (new) The bag-filling method defined in claim 58
2 wherein the bags are conveyed at a fixed height without substantial
3 vertical displacement.

1 60. (new) The bag-filling method defined in claim 58
2 wherein the apparatus is shifted down into the bag at a speed
3 different from that at which it is raised in the bag.

1 61. (new) The bag-filling method defined in claim 58,
2 further comprising the steps of
3 during step d)

4 d') pouring a predetermined volume of the material into
5 the one stopped bag and thereafter
6 d") monitoring a weight of the bag and pouring the
7 material into the one stopped bag until the bag's weight reaches a
8 predetermined desired weight.

1 62. (new) The bag-filling method defined in claim 61
2 wherein during step d') the material is poured at a greater
3 volume/time rate than during step d").

1 63. (new) The bag-filling method defined in claim 58,
2 further comprising the step of:

3 i) sealing the bags in a sealing station downstream of
4 the filling apparatus.

1 64. (new) The bag-filling method defined in claim 58,
2 further comprising prior to step c) the step of
3 b') laterally squeezing the bags to open same.

1 65. (new) The bag-filling method defined in claim 64
2 wherein the bags are laterally squeezed by being gripped at
3 opposite edges and then pushing the gripped opposite edges toward
4 each other.

1 66. (new) The bag-filling method defined in claim 58,
2 further comprising the step of
3 aspirating dust from the bag at the filling apparatus.

1 67. (new) An apparatus for filling a row of bags, the
2 apparatus comprising:

3 a filler having a downwardly open tube with a vertically
4 displaceable lower end;

5 discharge means for pouring bulk material down through
6 the tube;

7 transport mean for conveying the row of bags horizontally
8 in steps underneath the tube while holding the bags against
9 vertical displacement;

10 drive means for shifting the tube between a position
11 wholly above the bags and a position opening inside the bags
12 generally at a base of the one stopped bag; and

13 control means connected to the transport means, discharge
14 means, and drive means for, when each bag is stopped underneath the
15 tube, sequentially

16 a) stopping each bag underneath the filler tube and
17 holding the bag against vertical movement,

18 b) pouring bulk material from the tube into the stopped
19 bag through the tube while simultaneously
20 raising the tube upward until the stopped bag
21 is generally full and the tube reaches a
22 predetermined upper position still engaged in
23 the stopped bag,

24 c) stopping pouring of the material from the tube when
25 the upper position is reached,

26 d) lifting the tube out of the stopped bag, and

- 27 e) stepping the row of bags horizontally and thereby
28 displacing the filled bag horizontally out from
29 underneath the apparatus until the next bag in
30 the succession of bags is stopped underneath
31 the tube; and
32 f) repeating steps a) through e) sequentially with the
33 next bag stopped underneath the tube.

1 68. (new) The bag-filling apparatus defined in claim 67
2 wherein the filler has a hopper for the bulk material.

1 69. (new) The bag-filling apparatus defined in claim 67
2 wherein the filler has
3 a frame;
4 a drive motor on the frame; and
5 a transmission connecting the drive motor to the tube.

1 70. (new) The bag-filling apparatus defined in claim 67
2 wherein the drive means is of variable speed.

1 71. (new) The bag-filling apparatus defined in claim 70
2 wherein the drive means shifts the tube downward at a faster speed
3 than it uses to shift the tube upward.

1 72. (new) The bag-filling apparatus defined in claim 67
2 wherein the control means operates the pouring means during step d)
3 of d') pouring a predetermined volume of the material into
4 the one stopped bag and thereafter

5 d") monitoring a weight of the bag and pouring the
6 material into the one stopped bag until the bag's weight reaches a
7 predetermined desired weight.

1 73. (new) The bag-filling apparatus defined in claim 61
2 wherein during step d') the material is poured at a greater
3 volume/time rate than during step d").

1 74. (new) The bag-filling apparatus defined in claim
2 67, further comprising
3 means for sealing the bags in a sealing station
4 downstream of the filler.

1 75. (new) The bag-filling apparatus defined in claim
2 67, further comprising
3 means for laterally squeezing the bags to open same.

1 76. (new) The bag-filling apparatus defined in claim 75
2 wherein the means for laterally squeezing includes
3 a pair of grippers engageable at opposite edges of the
4 bags and
5 means for pushing the gripped opposite edges toward each
6 other underneath the tube.

1 77. (new) The bag-filling apparatus defined in claim
2 67, further comprising
3 means for aspirating dust from the bag at the filling
4 apparatus.